

C l a i m s

1. Process for producing a meat product from ground fish meat, wherein the meat product, subsequent to freezing and thawing, has an increased degree of binding and
5 consistency-forming properties,
c h a r a c t e r i z e d i n that the fish meat, subsequent to grinding, but prior to freezing, is added organic acids or salts thereof in combination with a cryostabilising substance.
- 10 2. Process according to claim 1,
c h a r a c t e r i z e d i n that the organic acid or its salts is present in an amount of 0,1% - 6% (w/w) with respect to the amount of the end product.
3. Process according to claim 1 or 2,
15 c h a r a c t e r i z e d i n that the cryo-stabilising substance is present in an amount of 1,0 - 12,0% (w/w) with respect to the amount of the end product.
4. Process according to claim 1-3,
c h a r a c t e r i z e d i n that the organic acid or
20 its salt comprises sodium-, potassium- or calcium-salts of lactic acid, citric acid, malic acid, acetic acid, fumaric acid or other known organic acids with a carbon chain length of 10 carbon atoms or less, where the acid may be straight or branched and may be single-valued or multi-
25 valued.
5. Process according to claim 1-4,
c h a r a c t e r i z e d i n that the cryostabilising substance comprises, trehalose, maltose, sucrose, lactose, glucose, sorbitol or other sugars or sugar alcohols.
- 30 6. Process according to claim 1-5,
c h a r a c t e r i z e d i n that it additionally comprises the addition of di- or tri-polyphosphates.

7. Process according to claim 1-6,
c h a r a c t e r i z e d i n that it, prior to the
freezing of the ground fish meat with added
cryopreservative and acid, is added a further amount of
5 liquid in the form of a water-based fluid, preferably
water, up to 200 % by volume of the originally added amount
of fluid.

8. Process according to claim 1-7,
c h a r a c t e r i z e d i n that it additionally
10 comprises the addition of sodium, potassium or calcium
chloride to the end product.

9. Process according to claim 1-8,
c h a r a c t e r i z e d i n that it additionally
comprises addition of one or more starches of potato,
15 maize, tapioca, waxymaize, or modified starches.

10. Process according to claim 1-9,
c h a r a c t e r i z e d i n that it additionally
comprises the addition of one or more hydrocolloids such as
guar gum, alginate, St. John's bread core flour, kojak
20 flour and xanthane.

11. Process according to claim 1-10,
c h a r a c t e r i z e d i n that it additionally
comprises the addition of one or more vegetable fibres from
wheat, oat, bamboo, cotton, leave trees or other vegetable
25 raw materials.

12. Process according to claim 1-11,
c h a r a c t e r i z e d i n that it additionally
comprises the addition of one or more vegetable proteins.

13. Process according to claim 1-12,
30 c h a r a c t e r i z e d i n that it additionally
comprises the addition of one or more animal proteins.

AMENDED CLAIMS

[received by the International Bureau on 11 March 2005 (11.03.2005);
original claims 1-13 amended, claims 14, 15 added (2 pages)]

1. Process for producing a fish meat product from ground fish with an increased degree of binding and consistency-forming properties, wherein the fish meat initially is ground, and wherein the process further is
characterized in that the fish meat, subsequent to grinding, is added trehalose and at least one salt of an organic acid, and then is subjected to freezing.
2. Process according to claim 1,
characterized in that the salt of the organic acid is added in an amount of 0,1 – 6% (w/w) with respect to the weight of the end product.
3. Process according to claim 1 or 2,
characterized in that the trehalose is present in an amount of 1,0 – 12,0% (w/w) with respect to the weight of the end product.
4. Process according to claim 1 – 3,
characterized in that the salt of the organic acid is a sodium-, potassium- or calcium-salt of a salt with a carbon chain length of 10 carbon atoms or less and wherein the acid may be straight or branched and may be single- or multivalent, preferably lactic acid, citric acid, malic acid, acetic acid and/or fumaric acid.
5. Process according to claims 1 – 4,
characterized in that it additionally comprises adding di- and/or tri-polyphosphates to the ground and/or re-thawed fish meat.
6. Process according to any of the preceding claims,
characterized in that it additionally comprises adding prior to the freezing of the ground fish meat a further amount of liquid in the form of a water-based fluid, preferably water, in an amount of up to 200% by volume of the originally added amount of fluid.
7. Process according to any of the preceding claims,
characterized in that the additionally comprises the addition of sodium chloride, potassium chloride and/or calcium chloride to the end product.
8. Process according to any of the preceding claims,
characterized in that it additionally comprises addition of one or more starches of potato, maize, tapioca, waxy maize, or modified starches.
9. Process according to any of the preceding claims,
characterized in that it additionally comprises the addition of one or more

hydrocolloids such as guar gum, alginate, St. John's bread core flour, kojak flour and xanthane.

10. Process according to any of the preceding claims, characterized in that it additionally comprises the addition of one or more vegetable fibres from wheat, oat, bamboo, cotton, leave trees or other vegetable raw materials.

11. Process according to any of the preceding claims, characterized in that it additionally comprises the addition of one or more vegetable proteins.

12. Process according to any of the preceding claims, characterized in that it additionally comprises the addition of one or more animal proteins.

13. Process according to any of the preceding claims, characterized in that the fish meat originates from white meat fish, e.g. cod, haddock, coalfish, white salmon (silver smelt, *Argentina sillus*) or blue whiting (*Micromesistus poutassou*).

14. The use of trehalose in combination with an organic salt as a cryostabilizing substance for producing a ground fish meat product with improved binding and consistence-forming properties wherein the fish meat is subjected to a freezing and re-thawing process.

15. The use according to claim 14, wherein the fish meat originates from white meat fish, e.g. cod, haddock, coalfish, white salmon (silver smelt, *Argentina sillus*) or blue whiting (*Micromesistus poutassou*).